

F.—Rights to other Forest Produce.

In India, these are apparently more numerous than in Europe. Various flowers and fruits are collected for food, for dyeing or for medicine². Bark is collected for tanning and for fibre. Wild honey and wax are gathered. In some cases, limestone, pebbles, laterite, gravel, and other substances, are collected from the surface or dug up.

The regulation of these, according to local circumstances, never presents any difficulty. The locality, the seasons of collecting, should be specified, and frequently the quantity can at least be roughly determined with reference to loads, &c.

§ 32.—General Rules.

It should here be generally remarked that however much there may be a right to collect such produce, there never can be a right to collect it in a wasteful way, or in a way that injures the property. You may collect honey, but you cannot (as I have seen done in Burma) cut down a large tree to enable you to get at the comb more easily³.

Bark may be collected for tanning, but it can be only from trees about to be felled⁴, not so as to kill valuable timber trees (unless, like oak bark, it can be best taken from young stems which can be reproduced by coppicing from the stool).

If in any case the bark is more valuable than the stem, and the tree is in fact grown for its bark, then we have a case where the tree is necessarily consumed, and we have to fix the number and size of the trees to be cut.

² In Bombay the myrobolans (fruits of *Terminalia Chebula* (hirda) and *belerica*, and in other parts also mohwa flowers (*Bassia latifolia*), may be mentioned as familiar examples.

³ And this is quite a different thing where the right in its nature involves the consumption of a thing, and consequently its destruction. If I have a right to certain pine timber, the trees cut are in one sense destroyed, but then it is the nature of trees to be felled when they are mature, and their reproduction is expected from seed. But if I have a right to firewood, where the stool may shoot up again and produce a fresh supply, here I am bound so to cut that the stool be not destroyed.

⁴ See Roth, § 290.

If fibrous bark like that of the *Sterculia*⁵ is taken for rope-making without killing the tree, then the right is regulated by prohibiting trees under a certain age or growth being touched ; by prescribing that strips of a certain length and breadth and of a certain number only can be taken from each tree ; and also that a certain period of rest and recovery is to be allowed to the trees.

The collection of surface products like gravel, limestone, pebbles, &c., must not be carried on in places where seedling growth is likely to be injured by it. Nor can kankar (lime nodules) be dug out of the ground, except on special condition of filling up the holes made, and not interfering with any areas under young growth or under special treatment.

§ 33.—*Manufacture in the forest : Lime—Surkhi—Charcoal, &c.*

Under this head, I must allude to certain practices, which perhaps rarely or never appear as *rights*, but which are nevertheless often demanded or require to be provided for. I allude to practices involving some process of *manufacture* in or near the forest.

For example, catechu boiling, burning lime or charcoal, and in some parts, burning what is called “surkhi” (a sort of clay or marl rubble, found on the surface, gathered in the forest and burned with the aid of brushwood collected in the forest : it is used for mixing with lime-mortar).

In these cases you have the produce of the forest,—chips of catechu wood, billets of wood, limestone, pebbles, &c., collected, and a further supply of brushwood, &c., is or may be required from the forest to carry out the burning or boiling.

It is conceivable that there may be such a thing as a right to have the materials, but not to endanger the forest by making the furnaces and lighting the fires within its limits.

In Burma, three species are so barked :

Shawbyú (*S. fatida*).

Shawnce (*S. villosa*).

Shawwáh (*S. ornata*).

If it becomes necessary to arrange for such cases, the quantity of material should be fixed; but it must be provided that the process of manufacture is to be carried on outside the forest at such a distance as is safe with regard to danger from fire.

Limestone is sometimes found in the beds of dry "ráos" or streams intersecting the forest. The burning of lime in the bed may be admissible or not according to circumstances.

Where kilns for lime are of a certain customary size, it may be sufficient to fix the number.

Wood for charcoal burning is fixed by the number of stems or by a cubic measure (or even weight) of wood of specified kinds.

Catechu boilers, I believe, always use the twigs, chips, &c., of the tree to boil the pans, so that separate fuel is not required.

§ 34.—*Collection of Resin.*

Rights to tap or notch or bore trees for resin, wood-oil, or varnish may sometimes be claimed. Here again, as the trees are wanted to produce the material, year after year, the right must be exercised without killing the trees⁶.

You cannot have a right to the practice of ringing a fine sâl tree to get a little resin (*râl* or *Anna*) from it; and this practice, once so common in Bengal, has been put a stop to in all places where Government has the right of control. *Rights* do not appear to exist, however, in Bengal, to sâl resin—even to collect it in a reasonable way.

Resin rights may perhaps be claimed in the coniferous forests of the Himalaya.

It belongs to a work on forest utilization to describe the best processes of resin extraction⁷. Here I can only allude to some laws which illustrate the kind of regulation that has to be enforced in respect of this right.

Hartig says that the exercise of the right retards the growth of the trees, injures the quality of the wood and the production of

⁶ See page 115, *ante*.

⁷ See, for example, Gayer's *Forstbenutzung*.

good seed, causes the trees more easily to succumb to wind-storms and renders them liable to the attacks of insects.

The regulation of the right is, therefore, a matter of the first necessity. He recommends that the right should be confined to compartments going to be cut within the next 20 years; each tree is to be incised only in two places, and incisions to be made only once in three years for each tree. The resin collection should be stopped for the four years preceding the actual felling, so that the trees may have a little time to recover, and give a good crop of seed before they fall⁸.

Eding says that strips of bark should be taken off 2 to 3 inches wide, and the resin scraped off twice in the year⁹.

The Austrian rule is described by Grabner¹⁰. The tapping is confined to mature trees, and to places where the trees stand close together (chiefly, I presume, so that the trees which are rendered brittle by the process may be not so liable to windfall).

In spring the bark may be cut off in perpendicular strips, 3 feet to 4 feet long, cut to within 2 feet of the ground. The strips may be of such breadth that at least 4 inches to 5 inches may be left between them. Once in two years the resin that has exuded may be taken off, and then the strip is slightly widened by a cut on each side.

The Austrian pine (*P. austriaca* (*laricio*) *Schwarz föhre*) is cut by notches (*schrottung*), something the shape of a scallop shell from 3 to 6 inches, one in each tree, or two in large trees.

These principles, it will be remembered, do not relate to what is the best method of getting resin as a commercial product, or in cases of trees grown more or less expressly for resin production: they refer to what is necessary where the object is to manage the forest properly as a timber forest, and the right to take resin appears as a right of user burdening the forest.

⁸ The Saxon Mandat of 1813, § 32, adopting this rule, fixes six years instead of four.

⁹ Page 124. An ordinance of Wurtemberg adopts this also.

¹⁰ Page 369.

§ 35.—*Torches.*

Under the head of resin rights, I may allude to the right to “jugni” found in parts of the Himalaya: it is a right to cut off resinous splinters, a bundle of which affords an effective torch. It is only cut from deodar and *Pinus excelsa*. *Pinus longifolia* wood would do as well, but I have not met with the right in localities where this species chiefly grows.

Usually this right is only claimed so as to utilize stumps (see *ante*, page 160).

It can never be claimed so as to destroy useful living timber trees. But usually there are in our forests ‘torsos’—mutilated trunks, the result of the waste of former days.

These should be marked and entered in a register. The felling of these is then prohibited, and they are left, as long as they last, to provide “jugni.”

§ 36.—*Varnish and Wood Oil.*

In Burma and other parts, the wood-oil of *Dipterocarpus* and the black varnish of *Melanorrhæa usitata*¹ is much in demand, and there may be rights to collect it. The illustrations given above, regarding the regulation of resin collecting, will indicate the nature of the restrictions to be enforced² in case these practices are claimed as rights.

¹ See Indian Forester, Vol. I, page 364, where an account of this industry is given.

² In Burma I understand the rules are, that Kanyin trees may not be tapped at all if under 6 feet girth, Eng trees if under 3 feet, and thitsi (*Melanorrhæa*) 2½ feet.

Kanyin trees are to have only the following number of notches according to girth:—

From 7½ ft. to 9 ft. girth	...	one notch,
„ 9 ft. to 10 ft. „	...	two notches,
Over 10 ft.	...	three notches,

in any one senzou.